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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Masanobu NINOMIYA et al.

Group Art Unit: 1756

Application No.: 09/722,828

Examiner: J. Dote

Filed: November 28, 2000

Docket No.: 107971

For: TONER FOR DEVELOPING ELECTROSTATIC LATENT IMAGE, TWO-COMPONENT DEVELOPER, AND IMAGE-FORMING PROCESS

DECLARATION UNDER 37 C.F.R. §1.132

Director of the U.S. Patent and Trademark Office
Washington, D.C. 20231

Sir:

I, Masanobu NINOMIYA, a citizen of Japan, hereby declare and state:

1. I have a master's degree in science which was conferred upon me by

Hiroshima University in Hiroshima-shi, Hiroshima, Japan in 1991.

2. I have been employed by Fuji Xerox Co., Ltd. since 1991 and I have had a total of 10 years of work and research experience in organic chemical materials.

3. I am familiar with the above-identified application.

4. I and/or those under my direct supervision and control have conducted the following experiments.

The experiments were conducted to analyze the properties of Example 31 (Binder 28) of U.S. Patent No. 5,250,382 to Shimojo et al. (hereinafter "Shimojo"). Based on the provided Mn, Mw and blend ratio of the domain and matrix of Example 31 of Shimojo, the following table was determined.

| | Mn | Mw | Blend Ratio | Ratio of not higher than 5×10^3 in the integral molecular weight distribution | Ratio of at least 1×10^5 in the integral molecular weight distribution | Ratio of not higher than 5×10^3 in the integral molecular weight distribution (toner) | Ratio of at least 1×10^5 in the integral molecular weight distribution (toner) | $W(5 \times 10^3) / W(1 \times 10^5)$ (toner) |
|--------|------|-------|-------------|--|---|--|---|---|
| Domain | 5000 | 12000 | 50 | 35 | 0.1 | | | |
| Matrix | 6800 | 21000 | 50 | 30 | 4.8 | 29 | 2.45 | 13.4 |

Further, it was found that binder resins 27, 39 and 40 of Shimojo satisfy the requirements of claim 2 of the present invention, but each of binder resins 27, 39 and 40 have values of $W(5 \times 10^3) / W(1 \times 10^5)$ even smaller than 13.4 because the toner of binder resins 27, 39 and 40 have even larger molecular weights than that of Example 31, thereby decreasing the $W(5 \times 10^3)$ value and increasing the $W(1 \times 10^5)$ value.

It was also determined that crosslinking decreases the value of $W(5 \times 10^3) / W(1 \times 10^5)$ because crosslinking results in a smaller $W(5 \times 10^3)$ value and larger $W(1 \times 10^5)$ value.

5. I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and/or imprisonment under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing therefrom.

Date: 8/22/02

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